

Public Health & The Changing Climate

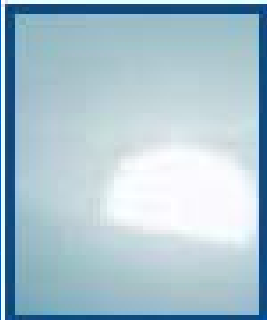
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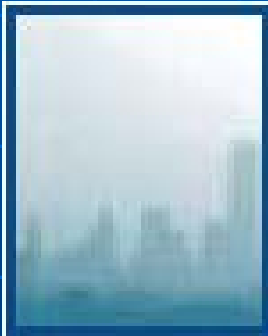
Agenda

- Introduction – Health Impacts of Climate Change
- Public Health Role
- Focus on Excess Heat Policy
- County services – who does what

Potential Health Impacts from Global Climate Change



Heat Waves –
Increased heat-related deaths & illnesses



Air Pollution - Increased cardiovascular & respiratory diseases from worsening air quality

Terrestrial Changes - New geographic ranges & activity of disease-carrying animals, insects & infective parasites. Increased infections, allergies (pollen).



Potential Health Impacts from Global Climate Change



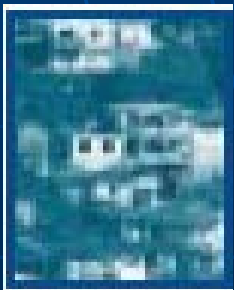
Altered Marine Ecology - **Changes in incidence of cholera & food poisoning from toxic algae**

Saltwater Encroachment in Coastal Aquifers - **Increased risk of intestinal illnesses from water supplies**



Drought – **Threatening human food & water supplies**

Storms/Floods - **Increased deaths & injuries. Increased intestinal illnesses from flooding of sewage treatment plants**



Population Displacement - **Injuries & increased risk of disease due to migration & crowding**

Public Health Mitigation to Lessen Effects of Climate Change

- National level
 - support vaccine development against vector borne and infectious diseases
- State and Local Level
 - enhance surveillance for infectious and chronic diseases
 - improve media and public education efforts



Public Health Mitigation to Lessen Effects of Climate Change (cont.)

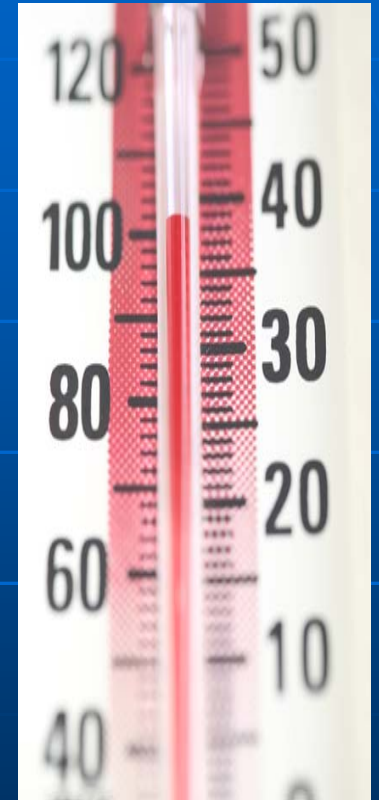


- National, State & Local level
 - **work toward improved water systems and watershed protection policies**
 - **participate in urban planning to reduce air pollution**
 - **support public transportation infrastructure to reduce emissions**



Global Warming, Climate Change and Health Effects

- Heat related illness and death
- Increased Respiratory Illness
- Increased Cardiovascular Diseases
- Infectious Diseases
 - food-borne illness
 - water-borne diseases
 - vector-borne diseases



Recent Weather Changes Relevant to San Diego

■ Record setting heat

- 10 hottest years in United States occurred in the past 14 years
- 2006 hottest surface temperature since 1985
- The Intergovernmental Panel on Climate Change (IPCC) projects a 4.5 C increase in temperature by 2100

■ Longer droughts

- Droughts have occurred over larger areas of the world since the 1970s, especially in the tropics and subtropics

Heat Related Illness and Death

- ◆ At high temperatures, mortality increases
- ◆ Heat stress, body cannot replace lost salt and fluids.
heat cramps, heat exhaustion, heat stroke
Effect may be cumulative over a number of days
- ◆ Elderly, children under 4, people with heart and lung problems, and urban dwellers are most at risk
- ◆ 2003 heat wave in Europe - at least 22,000 killed
- ◆ Chicago summer heat wave 1995 killed over 700 people



Local Response

- July 2006 California experienced an extended heat wave which led to the death of 140 people over a 13-day period
- 5 deaths in San Diego County were directly attributed to the heat wave

Local Response (cont.)

- Need to develop a local Response Plan
 - Public Health Administration & Emergency Medical Services
 - Aging & Independence Services
 - Office of Media and Public Affairs
- 2007 activation of the Plan at Phase III (Heat Alert) demonstrated need to bring in other partners
 - Office of Emergency Services
 - Medical Examiner's Office
 - Mental Health and Alcohol and Drug

San Diego Excessive Heat Response Plan

Phase I & II:

- **Monitor weather June 1-September 30**
- **Track 9-1-1 paramedic transport calls for heat-related symptoms**
- **Cool Zones opened June-September; Cool Zone call center 1-800-510-2020**
- **Grant from SDG&E supports electric fans and bus passes for seniors (2009 ↓ funding)**

San Diego Excessive Heat Response Plan (cont.)

Phase III & IV – may trigger the following:

- **Issue press releases from Health Officer**
- **Use reverse 9-1-1 system to alert clients and caregivers – phone numbers must be pre-entered**
- **Open Emergency Operations Center**
- **Declare Health Emergency**

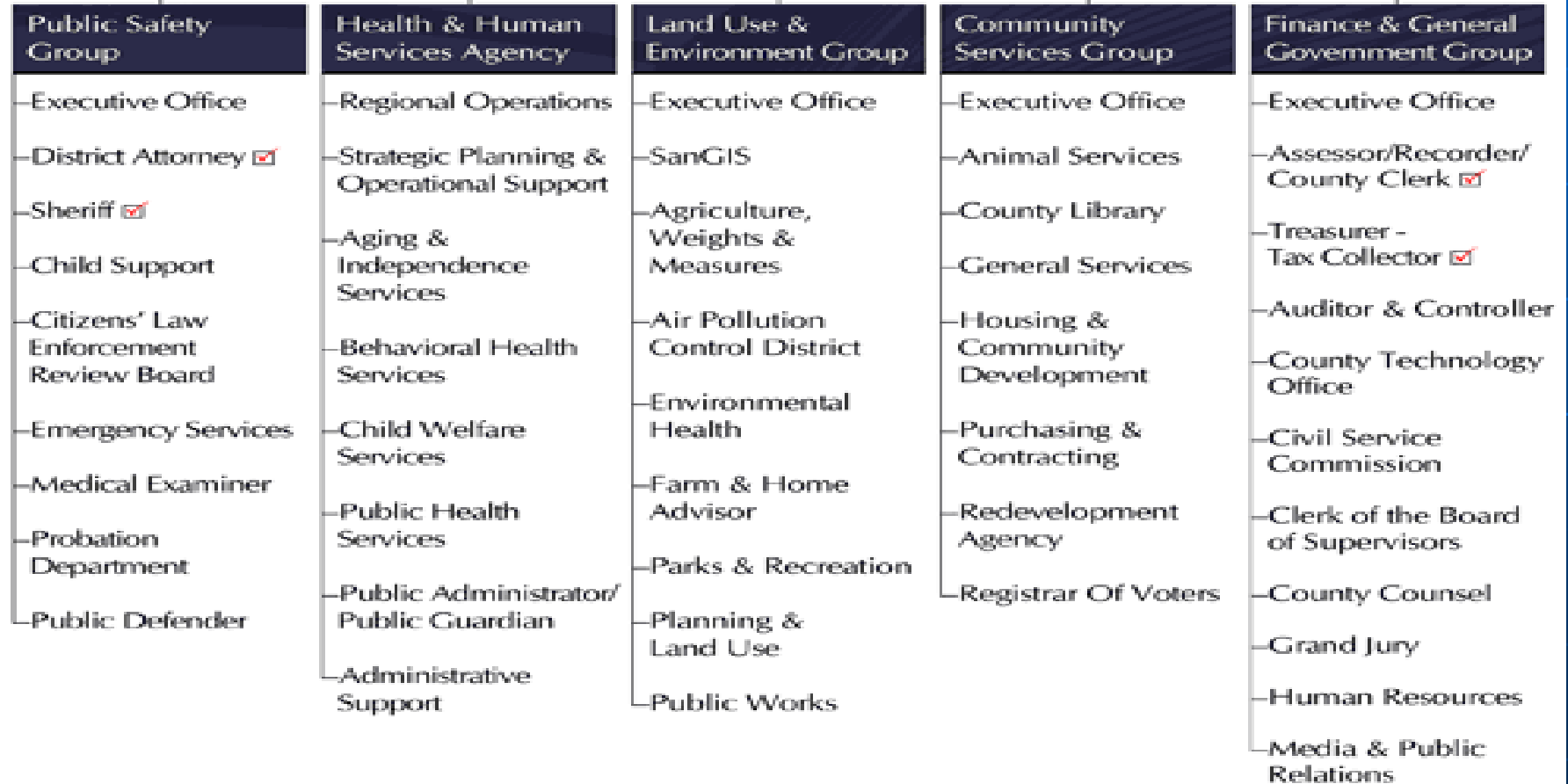
San Diego in the Future

- Increasing need to activate the Excessive Heat Response Plan each summer
- Extending the months of concern beyond June – September
- Aging of the population, population growth, economy-cost of living all contribute to the health impact of climate change

Citizens of San Diego County

Board of Supervisors ✓

Chief Administrative Officer



✓ Elected Official

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Who Does What Within County

PUBLIC SAFETY GROUP	HEALTH & HUMAN SERVICES AGENCY	LAND USE & ENVIRONMENTAL GROUP	COMMUNITY SERVICES GROUP	FINANCE & GENERAL GOVERNMENT GROUP
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**OFFICE OF
EMERGENCY
SERVICES**

**REGIONAL
OPERATIONS**

**AIR POLLUTION
CONTROL DISTRICT**

**ANIMAL
SERVICES**

**MEDIA & PUBLIC
RELATIONS**

**AGING &
INDEPENDENCE
SERVICES**

**ENVIRONMENTAL
HEALTH**

**HOUSING &
COMMUNITY
DEVELOPMENT**

**PUBLIC
HEALTH
SERVICES**

**BEHAVIORAL
HEALTH
SERVICES**

Questions?

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